

REMARKS

Claims 1, 6, and 7 have been amended, claims 2, 3, and 5 have been canceled, and claims 9-18 have been added by this amendment. Upon entry of this amendment, claims 1, 4, and 6-18 will be pending in the above-identified application.

Drawings

Applicant requests withdrawal of the objection to the drawings. Figures 5 and 12-16A have been amended to include the indication of "PRIOR ART" per the Examiner's recommendation. An indication of prior art has not been added to Figure 16B because Figure 16B relates to performance of the apparatus of the present invention. See e.g., paragraph [0044] in the Brief Description of the Drawings section of the specification.

Along with a replacement drawing sheets 3/12 and 9/12-12/12, a marked copy of these sheets showing the "PRIOR ART" additions to Figures 5 and 12-16A in red is included for the Examiner's approval.

Claims 1, 4, and 8

Applicant respectfully requests reconsideration of the rejection of claims 1, 4, and 8 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,257,076 (Shimizu).

Claims 1 and 4

As amended, claims 1 and 4 recite a magnetic tape apparatus including a drum comprising a stationary drum portion including a sliding portion against which the magnetic tape is in sliding contact during operation of the apparatus and a rotary drum portion rotatably connected to the stationary drum portion, the rotary drum portion including a magnetic head, wherein the sliding portion has a generally flat portion formed around a circumferential surface of the sliding portion and has a plurality of peak portions formed around the circumferential surface of the sliding portion so that the peak portions protrude from the flat portion at a predetermined pitch, and wherein a surface roughness R_{max} is between about 0.5 μm and about 2.0 μm and a width of the flat portion is between about 10 μm and about 230 μm .

Shimizu discloses a drum 21 for tape recording comprising grooves 25 including crests 29 and flat portions 28. See Fig. 5. Shimizu does not disclose a surface roughness R_{max} of between about 0.5 μm and about 2.0 μm and a width of the flat portion of between about 10 μm and about 230 μm . Regarding dimensions, Shimizu only describes an angle θ between the tape and a side wall of the groove 25 and a pitch L and a width W of grooves 24 measured in a longitudinal direction of the stationary guide drum 21. See column 3, line 18, to column 4, line 5. Because Shimizu does not disclose every feature of claims 1 and 4, the Section 102 rejection of claims 1 and 4 is improper. Accordingly, Applicant requests the rejection be withdrawn.

Claim 8

As amended, claim 8 recites a method for producing a magnetic tape apparatus including providing a cutting tool having a tip portion and generally straight sides extending from the tip portion, cutting a circumferential surface of the sliding portion to form a flat portion substantially parallel to a sliding contact surface of the magnetic tape and to form peak portions protruding from the flat portion, and controlling a width of the flat portion by controlling a force by which the cutting tool is pressed against the circumferential surface of the sliding portion during the cutting step and/or controlling a speed at which the cutting tool is moved along the circumferential surface of the sliding portion during the cutting step.

Shimizu discloses a grooved drum for tape recording including crests 29 and flat portions 28. See Fig. 5. Shimizu does not disclose controlling a width of the flat portion by controlling a force by which the cutting tool is pressed against the circumferential surface of the sliding portion during the cutting step and/or controlling a speed at which the cutting tool is moved along the circumferential surface of the sliding portion during the cutting step.

Because Shimizu does not disclose every feature of the claims, the rejection is improper. Accordingly, Applicant requests the rejection be withdrawn.

Claims 6 and 7

Applicant respectfully requests reconsideration of the rejection of claims 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Shimizu. The rejection is improper because claims 6 and 7 depend from claim 1, which was improperly rejected

as shown above and the reference does not suggest the previously noted claim features. For example, although Shimizu discloses dimensions for an angle θ between the tape and a side wall of the circumferential groove 25 and a pitch L and a width W of longitudinal grooves 24 of the stationary guide drum 21 (See column 3, line 18, to column 4, line 5), Shimizu does not disclose or suggest a surface roughness R_{max} of between about 0.5 μm and about 2.0 μm and a width of the flat portion of between about 10 μm and about 230 μm . As described in the specification, Applicant has determined that forming the flat portion and peak portions to provide the claimed surface roughness R_{max} and width of the flat portion is required for superior performance compared to the prior art. See e.g., paragraphs [0078]-[0085] of the specification of the present application and Figs. 9B, 10, and 11. The M.P.E.P. recognizes that identification of particular parameters by the inventor as critical supports a finding of non-obviousness. See e.g., M.P.E.P. § 2144.05(II) and (III).

Because the reference does not disclose or suggest every feature of the claims, the rejection is improper. Accordingly, Applicant requests the rejection be withdrawn.

Conclusion

As it is believed that the application is in condition for allowance, a favorable action and a Notice of Allowance are respectfully requested.

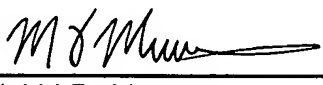
Applicant believes there is no fee due at this time. However, the Commissioner is hereby authorized to deduct any deficiency or credit any overpayment to Deposit Account No. 19-3140.

If the Examiner desires, Applicant welcomes a telephone interview to expedite prosecution.

Respectfully submitted,

SONNENSCHN NATH & ROSENTHAL LLP

Date: 10/11/06

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AMENDMENTS TO THE DRAWINGS

Please replace drawing sheets 3/12 and 9/12-12/12 with the attached replacement sheets 3/12 and 9/12-12/12 consisting of Figures 5, 6, and 12-16B.

3/12

FIG.5

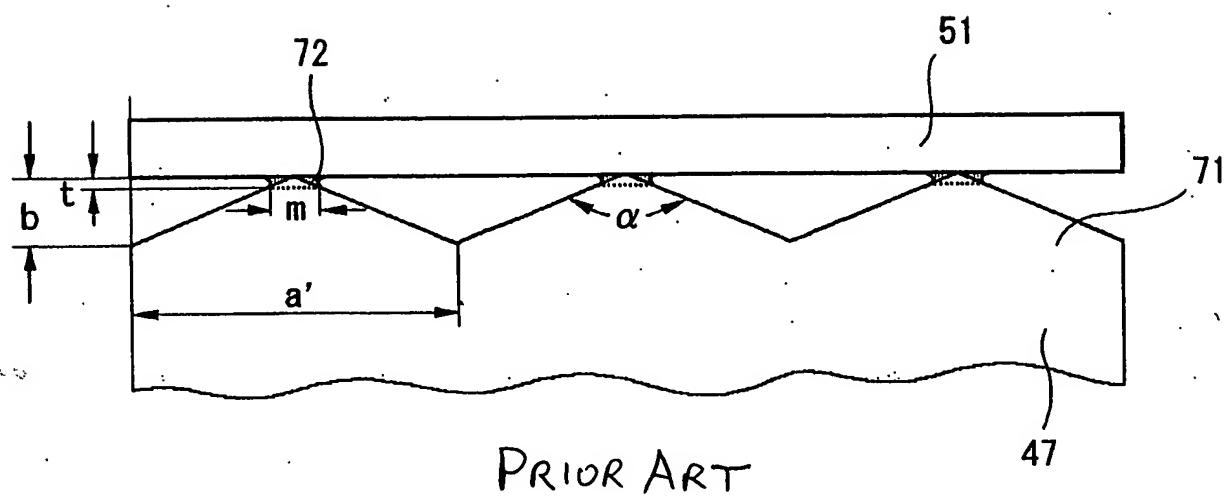


FIG.6

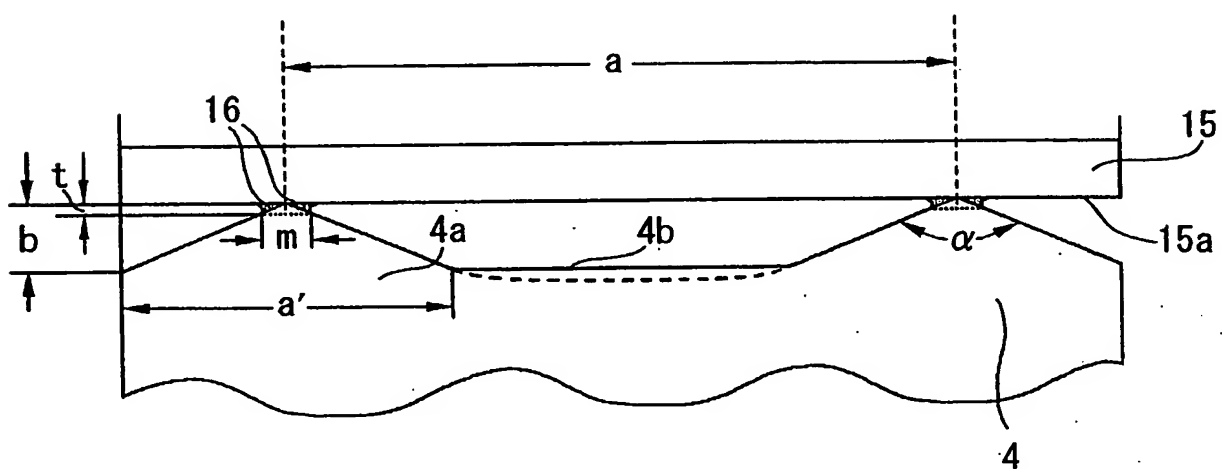


FIG. 12

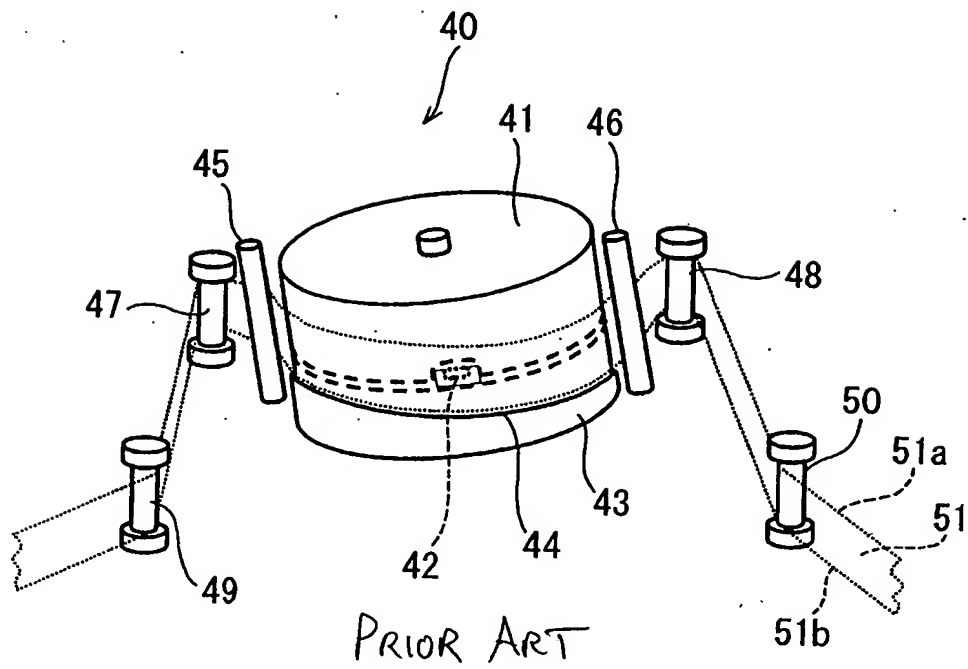


FIG. 13

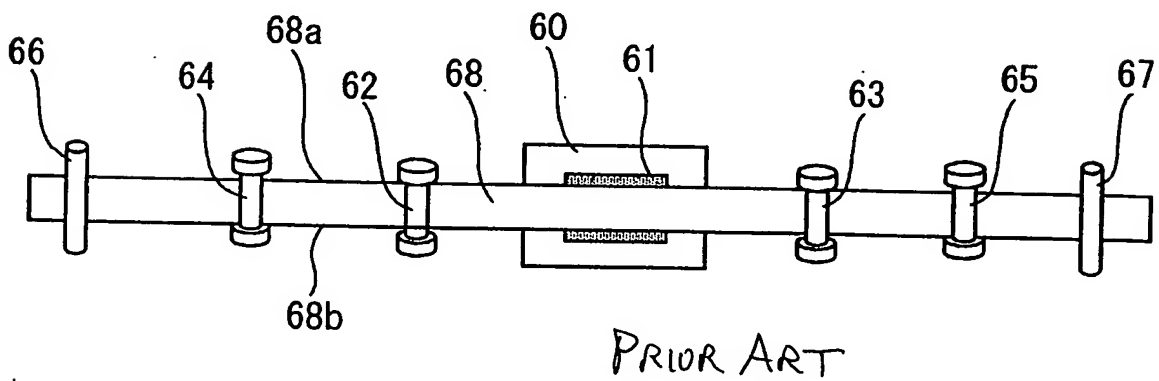


FIG.14A

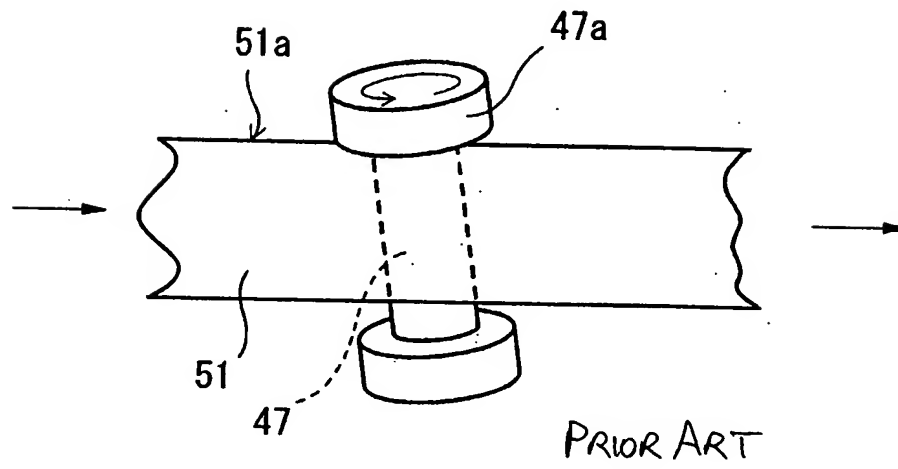
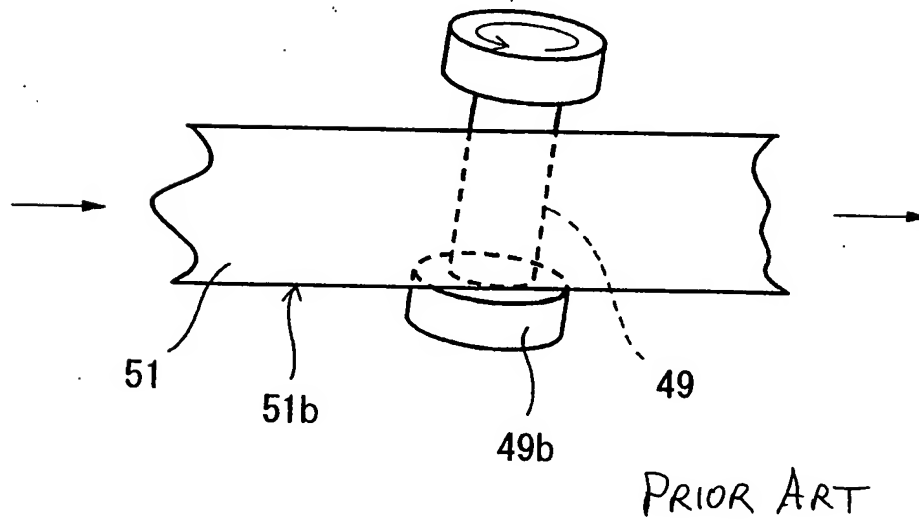
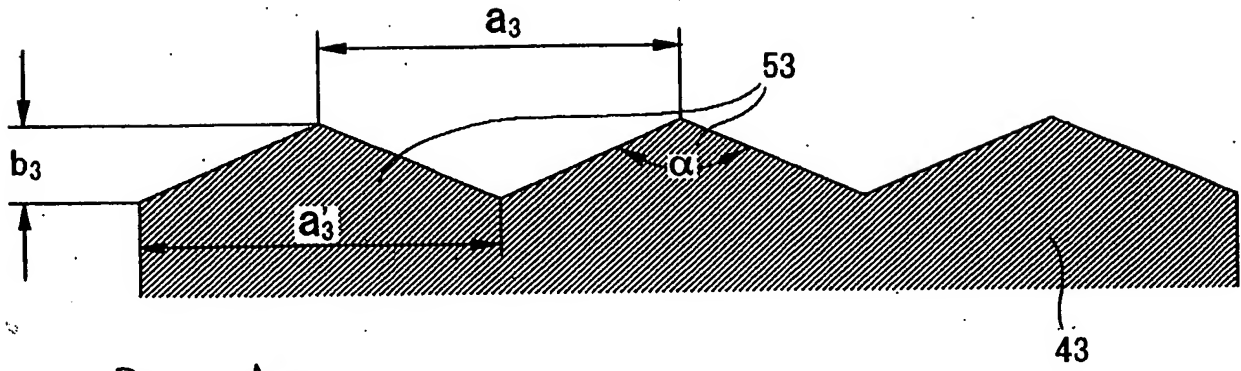


FIG.14B



11/12

FIG.15



Prior Art

12/12

FIG.16A

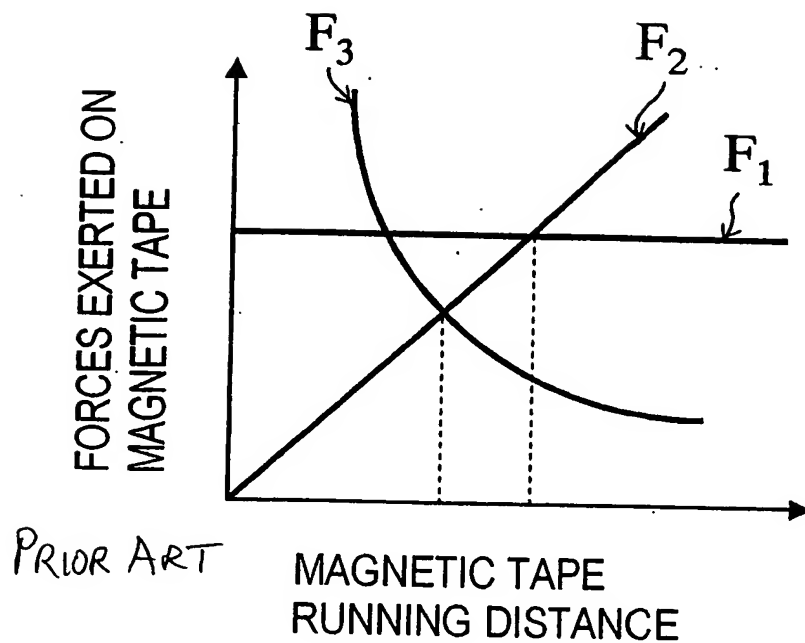


FIG.16B

